July 9, 1929. C. J. GEISER 1,720,593

SPRING LATCH

Filed Feb. 6, 1926

Fig. 1.

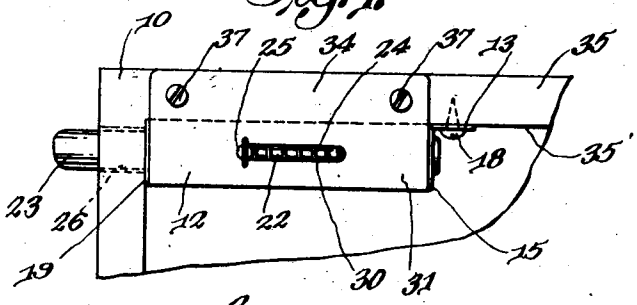


Fig. 2.

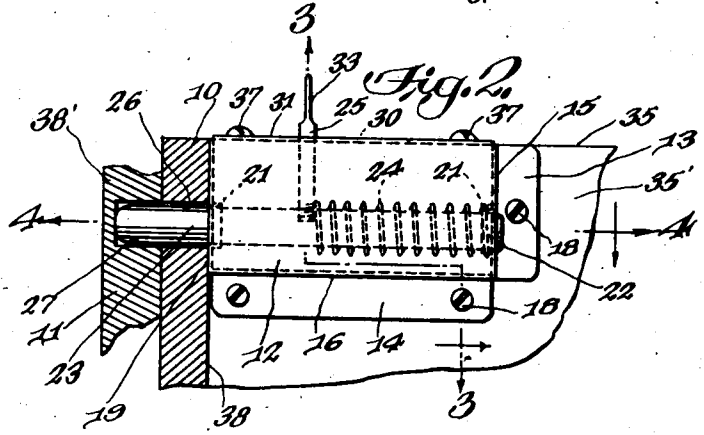


Fig. 3.

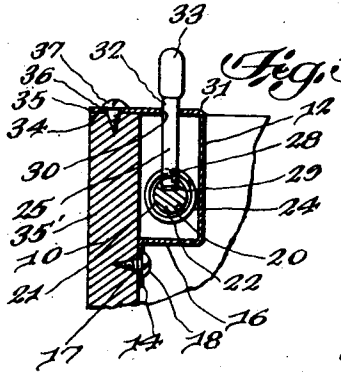


Fig. 4.

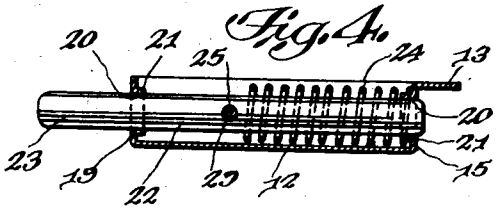
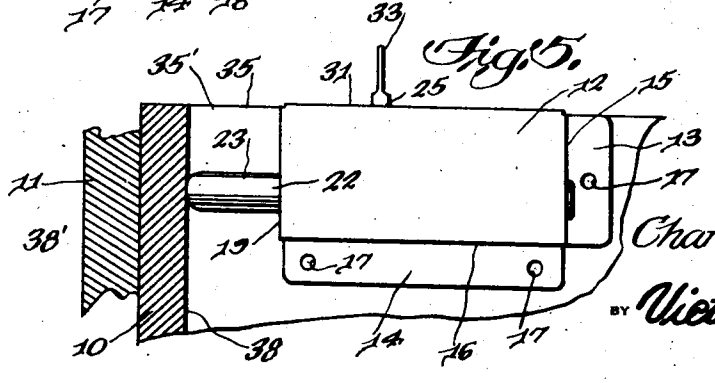


Fig. 5.



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Patented July 9, 1929. 1,720,593

UNITED STATES PATENT OFFICE.

CHARLES J. GEISER, OF CHICAGO, ILLINOIS.

SPRING LATCH.

Application filed February 6, 1926. Serial No. 86,543.

This invention relates to certain novel improvements in spring latches and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

Among the salient objects of the invention is the production of a device of this character wherein there is provided a casing having a portion facilitating mounting the casing in position on a structural unit to align the latch bolt in proper alignment with the hole through which it is adapted to pass and project into a keeper hole formed in another structural unit.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings illustrating the preferred form of construction and in which:

Fig. 1 is a top plan view of the invention illustrating the same associated with a structural unit,

Fig. 2 is a side elevational view of that illustrated in Fig. 1,

Fig. 3 is a sectional detail view of the invention taken substantially on line 3—3 of Fig. 2,

Fig. 4 is a sectional detail view of the same taken substantially on line 4—4 of Fig. 2, and

Fig. 5 is a side elevational view similar to that illustrated in Fig. 2 showing the latch structure in position to facilitate aligning the latch bolt thereof in alignment with holes to be formed in the structural units.

The spring latch embodied in the present invention is an improvement over that disclosed and described in the Reissue Patent No. 16,221 dated December 8, 1925, of my original Patent No. 1,486,240 dated March 11, 1924, illustrating the spring latch positioned to releasably latch a receptacle within a housing in an elevated position. In this connection I have found that in manufacturing the device as illustrated in the reissue patent that in order to properly align the latch bolt and keeper opening the boring of these holes must be done in assembly and in doing so I have found it difficult to properly align the latch bolt with the openings in attaching the casing of the latch structure to the receptacle. The same difficulty arises where the openings are bored with the device dismantled. Therefore, to overcome this difficulty I provide a latch structure whereby the latch bolt can be properly aligned with the opening through which it is adapted to pass and project into a keeper hole.

In this connection and with reference to the accompanying drawing 10 indicates a movable structural unit and 11 indicates a stationary structural unit to which the structural unit 10 is adapted to be releasably latched by my improved latch construction which will now be described. This latch includes as its preferred form of construction a metallic casing 12 having an end flange 13 and a bottom flange 14 extending laterally from the end 15 and bottom 16 respectively of the casing and perforated as at 17 for the passage of the shank portions of securing screws 18. These flanges as will be noted extend substantially at right angles with respect to each other and preferably form a continuation of the end and bottom walls respectively of the receptacle.

The end wall 15 and the opposite end wall 19 have aligned openings 20 formed therein and the material around these openings is drawn inwardly of the casing to provide bearing surfaces 21 for a latch bolt 22 slidably confined in the casing with an end portion 23 normally projecting from the casing through the medium of a spring member 24 mounted upon the bolt and confined between an operating pin 25 and the end wall 15. This end portion 23 is adapted to extend through a hole 26 formed in the structural unit 11.

The operating pin 25 has its inner end 28 threaded into a tapped hole 29 formed in the latch bolt as illustrated in Fig. 3. The operating pin extends outwardly from the casing through an elongated slot 30 formed in the top wall 31 thereof. The outwardly extending portion 32 of this operating pin is flattened as at 33 to provide a finger piece adapted to be grasped by the fingers of the operator to slidably move the latch bolt relatively of the casing against the action of the spring 24 bringing the projecting end portion 23 from confined position in the keeper hole 27.

To align the latch bolt with the keeper hole and the hole 26 there is provided a flange 34 extending in the plane of the top wall 31 and forming a continuation thereof.

This flange is adapted to be positioned on the top edge 35 of the wall 35′ of the structural unit 10 and is perforated as at 36 for the passage of the shank portions of screws 37.

In practice, the casing is positioned with its top flange 34 resting upon the top edge 35 with the latch bolt projecting from the casing into engagement with the wall 38 of the structural unit 10 as best illustrated in Fig. 5. In this position indicating marks are made on the wall 38 by a pencil or other marking instrument to properly locate the hole 26. After this has been accomplished the latch structure is removed and this hole is drilled. If the hole is drilled with the structural unit 10 in assembly with the structural unit 11 the drilling is continued until the keeper hole 27 is drilled in the wall 38′ of this latter structural unit. If the hole 26 is not drilled in assembly the keeper hole can be properly located from the drilled hole 26 by the use of a suitable gauge in a known manner.

After the hole 26 and the keeper hole 27 have been drilled the casing is placed against the wall 35′ with its flanges 13 and 14 bearing against the surface thereof and with its top flange bearing upon the top edge 35 and with the end 23 of the latch bolt projecting through the hole 26 into the keeper hole 27. The flanges are then secured to the structural units with the latch bolt in proper alignment with the keeper hole.

From the description herein it is apparent that I not only utilize the top flange for securing the casing in position but that I also make use of this flange as a gauge for locating the holes 26 and 27.

While I have stated that the latch structure is designed for incorporation as a part of the construction of my shoe shining stand disclosed in my reissue patent above mention it is apparent to those skilled in the art that the latch structure can be incorporated as a part of any structural units requiring a spring latch.

While I have shown and described the preferred form of construction it is apparent that various changes and alterations may be resorted to during manufacture without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention, what I claim as new and useful is:

1. A latch structure including a casing embodying a side wall, end walls for said casing having alinged openings therein, a spring urged latch member slidably mounted in said aligned openings and having a portion extending beyond one of said end walls, a foot portion extending substantially at right angles and formed as an extension of one of said end walls, unitary edge members for said casing, one of said edge members embodying a foot portion extending substantially at right angles and formed as a unitary part thereof, the other of the edge members embodying a projection extending beyond the open side of the casing and having a slot therein, and an operating member for said latch member extending through said slot so as to be movable therein.

2. A latch structure including a casing having an open side, foot portions on certain edges of said casing extending at right angles to said edges parallel with the open side of said casing, one wall of said casing having portions thereof projecting beyond said open side, a latch bolt slidably mounted in said casing and having a portion extended through an opening in another wall of said housing, spring means for urging said portion of latch bolt through said last named opening, and a handle on said latch bolt adapted to extend through an opening in the wall of said casing having portions projecting beyond said open side.

3. A latch structure including a casing, a latch bolt slidably mounted in said casing, a flange on said casing forming a continuation of the top wall thereof and extending in the plane of said top wall, a flange forming a continuation of an end wall of said casing and extending in the plane of the side of the casing, a flange forming a continuation of the bottom wall of the casing and extending in the plane of the side of the casing, said flanges serving to facilitate the mounting of said latch structure.

In testimony whereof I affix my signature.

CHARLES J. GEISER.